

Abstract

The present invention provides methods for identifying a compound that inhibits a kinase having an ATP binding site comprising the steps of:

- (a) contacting a composition comprising the kinase having an ATP binding site, an analyte which covalently binds to the ATP binding site of said kinase, and a test compound,
- (b) detecting binding of said analyte to said ATP binding site using mass spectroscopy,
- (c) comparing the mass peak of said analyte and kinase with the mass peak of said test compound and said kinase; and
- (d) determining whether said test compound inhibits said analyte from binding said ATP binding site wherein a test compound that diminishes the mass peak of said analyte and kinase is an inhibitor of said kinase. In particular, the analyte may be FSBA or biotinylated FSBA.